

Transitive and Intransitive in Chadic Languages

At a deep level of structure, all Chadic languages can be said to distinguish transitive from intransitive sentences. In some cases this underlying distinction is overtly marked in the surface sentence, e.g. Hausa *yaa cikàa* "he filled (it)" vs. *yaa cika* "it filled"; while in other cases the underlying distinction is not reflected in surface forms, e.g. Hausa *yaa koonèe* "he burned (it)" and the phonologically identical *yaa koonèe* "it burned"¹. When the underlying Tr./Intr. distinction is indicated, there are cases where the Intr. is in some ways overtly marked, e.g. Hausa *yaa fìta* "he went out" (with intransitivity being marked by the stem final short vowel), and there are cases where the Tr. is marked, e.g. Hausa *yaa fìtã* "he took it out" (with a Tr. stem formative *ã*). In this paper I propose to describe recent research on Dera and Bolanci, two closely related Chadic languages², with specific reference to the problem of the formal marking of Tr. vs. Intr. In the concluding section, I propose to reconsider some more generally known facts of Hausa in light of the data presented in the body of the paper.

Before proceeding with the descriptive material, let me clarify a few essential points. Most important, it should be understood that the terms "transitive" and "intransitive" apply primarily to types of verbal CONSTRUCTIONS and not to subcategories of verb roots. For example, in the sentence "the window broke", it is not the verb that is Intr. — "to break" is inherently neutral with regards to transitivity — but rather it is the total construction that is Intr. Where verb roots or stems are limited to one type of construction or the other, we can use the labels Tr. and Intr. as a convenient means of indicating context restrictions, but it should be understood that this usage is derivative and secondary.

For purposes of this paper a transitive sentence is defined as one in which the underlying verb phrase contains a direct object. All others are intransitive. In order to work with this simple notion it is essential to distinguish clearly between the non-occurrence of a constituent on the one hand, and the absence of a constituent in surface structure because of anaphoric deletion (or zero anaphora) on the other. For example, the Hausa sentences *yaa cika* "it filled", *yaa zamnàa* "he sat", and *yaa koonèe* "it burned", are ordinary intransitive sentences containing no direct object. By contrast, the similar two-word sentences *yaa cikàa* "he filled (it)", *yaa hàrbàa* "he shot (it)", and *yaa koonèe* "he burned (it)" must have had direct objects immediately following the verb in deep structure which were later deleted. These sentences thus qualify as transitive even though the surface sentences do not contain overtly represented objects.

By adopting a symbol for zero anaphora (\emptyset), we can notationally indicate the difference between such structurally distinct but phonologically indistinguishable sentences, e.g.

<i>yaa koonèe</i>	it burned
<i>yaa koonèe</i> \emptyset	he burned it

The importance of considering \emptyset as a constituent will become clearer when we consider cases where it itself is not phonologically zero.

In the Dera³ language the tenses⁴ fall into two syntactically distinct sets, which I will call Aux₁ and Aux₂. Aux₂, which includes the continuous and the future, is like the Hausa continuous tenses in requiring that the following verb be altered into a verbal noun, e.g.

	Verb		Aux ₂ with verbal noun	
Hausa	koomàa	} to return	yanàa koomàa-waa	} he is returning
Dera	mài		shì maa-ma	

Aux₁, which includes the perfective, rel-perfective, subjunctive, and imperative, behaves like the corresponding tense set in Hausa in that it occurs with finite forms of the verb, e.g.

	Verb			
Hausa	koonèe	} to burn	sun koonèe	} they burned it
Dera	tìle		wè tìle	

In Dera, the marking of the Tr./Intr. contrast is directly tied to the contrast between these two tense sets. Intransitives in Aux₁ – but not in Aux₂ – are obligatorily subject to an agreement rule that adds a pronoun suffix to the verb that copies the person/number/gender⁵ of the underlying subject:

$$X \text{ Subject}_{[\alpha \text{psn}]} - \text{Aux}_1 - \text{Verb} - Y \implies 1 - 2 - 3 + \text{pn}_{[\alpha \text{psn}]} - 4$$

Condition: Where α is any or of 8 persons, and Y does not contain the direct object of the Verb.

$$*na_{[1-\text{psn}]} \text{ tami} \implies na \text{ tami} + \text{pn}_{[1-\text{psn}]} > /nà \text{ tàmò-no/}$$

I (prf) kneel I kneel + I I knelt

$$*tamno_{[3f-\text{psn}]} a \text{ mai mēna} \implies tamno a \text{ mai} + \text{pn}_{[3f]} mēna$$

woman prf return home woman prf return + she home

$$> /tamno \text{ à mǎ-to mēna/}$$

the woman returned home

When a CVV verb adds the suffix – which I will refer to as an intransitive copy pronoun (icp) – it automatically drops the root final vowel. All other verbs change the final vowel to /o/, except before the 3m icp /ni/ when /o/ > /e/. The full set of icp's is illustrated in the following paradigm.

nà pìrò-no	I woke up	mà pìrò-m(u)	we woke up
kà pìrò-ko	you woke up	kè pìrò-ku	you(p) woke up
shì pìrò-shi	you(f) woke up		
à pìrè-n(i) ⁶	he woke up	wè pìrò-w(u)	they woke up
à pìrò-to	she woke up		

The rule applies equally for all tenses included in Aux₁, whether affirmative or negative. It applies, moreover, to all verbs in an Intr. construction, whether the verb itself might be considered intransitive (e.g. "to die") or neutral with regards to transitivity (e.g. "to burn").

wonò shée mùrà-ta ⁷	yesterday she died
wò-mən tìlà-ma ù	we did not get burnt
... bàlà kà poro-ko	in order that you go out
... bò-w tado-w ù	lest they break

It should be pointed out that the icp rule necessarily precedes all deletions or permutations of the subject. Intransitive imperatives, for example, are distinctively marked as masculine, feminine, or plural even though no overt subject is used, since the icp preserves the features of the underlying subject.

pòr-ko go out! (m) < * kà pòr-ko you (m) go out!
tà-shi yì moo-ji ⁸ go to your husband!
< * shì tà-shi yì moo-ji you (f) go to your husband!
təm-ku anedi squat there! < * kə təm-ku anedi you (p) squat there!

Since intransitives are so noticeably marked as such, Dera is able to treat the Tr. counterparts to motion verbs such as "go out", "come down", and "go up", just like any other Tr. verb. In Hausa the corresponding verbs require derived stems in Tr. constructions.

Tr. with \emptyset object		Intr.	
nà pòrì	I took it out	nà pòrò-no	I went out
à kèewe	he took it down	à kèewè-ni	he came down
mè àni	we lay it down	mè ànd-mu	we lay down

Cf. Hausa *naa fita/naa fìta*, *yaa sauka/yaa sàuka*, *mun kwanta/mun kwaṇṭaa*

In the tenses comprising Aux₂ all Dera verbs are obligatorily nominalized by adding a suffix *ma*. Intransitives in Aux₂ do not take an icp suffix.

nàa taa-ma	I am going	cf. nà tà-no	I went
wàn manje-ma	they are aging	cf. wè mànjò-wu	they have aged
àto maa-ma	she will return	cf. à mà-to	she returned

Before an expressed noun object, *ma* is obligatorily deleted. If there is no object, either because it has been deleted or because the sentence is intransitive, then *ma* actually appears in the surface sentence⁹. Following the nominalizer *ma*, a zero anaphora marker *i* overtly indicates the former presence of deleted objects.

Aux ₂ N object	Aux ₂ \emptyset object	Aux ₁ \emptyset object
mèn are gam	mèn ar-ma-i ¹⁰	mè arè
we are burying a ram	we are burying (it)	we buried (it)
w-àno wupe joko ù	wànò wup-ma-i ù	wò-naa wùpa ù
I will not sell the cap	I will not sell (it)	I didn't sell it

Since intransitives in Aux₂ are not marked in any special way, the zero anaphora marker *i* carries the entire function of formally distinguishing between Tr. and Intr. constructions.

Aux ₂ Tr. with \emptyset		Aux ₂ Intr.	
shìi tadə-ma-i	he is breaking (it)	shìi tadə-ma	it is breaking
wèn pul-ma-i	they are boiling (it)	wèn pul-ma	they are boiling
nàa por-ma-i	I am taking (it) out	nàa por-ma	I am going out
mèn yil-ma-i	we are raising (it)	mèn yil-ma	we are getting up

As in so many Chadic languages, tenses in Bolanci¹¹ can be grouped into an Aux₁ that occurs with finite verb forms and an Aux₂ that occurs only with nominalized verb forms¹². Unlike Dera, Bolanci does not have an icp system for intransitives. It does have an agreement system limited to Aux₁, but one which is not related to the question of transitivity. In place of Dera's 8-person agreement system limited to intransitives, Bolanci has a 3-gender system (masculine/feminine/plural)¹³ that applies equally whether the construction is Tr. or Intr.

X Subject_[αgen] Aux₁ – Verb – (Pronoun)' – Y ==>

1 – 2 + sfx_[αgen] – (3 + sfx_[αgen])' – 4

Condition: Where α is any one of 3 genders¹⁴.

The rule provides that in Aux₁ a suffix agreeing in gender with the subject is obligatorily inserted immediately after the verb and also after a direct object pronoun if present. The gender markers are zero for masculine, (a)K (= geminate) for feminine, and (a)N (= homorganic nasal) for plural.

nì/ka/isì wùndu bàayà	I/you (m)/he called the slave
shi/ita wùnd-ab bàayà	you (f)/she called the slave
mu/mè'e/màte wùnd-am bàayà	we/you (p)/they called the slave
nì/ka/isì wùndi taa woo	I/you (m)/he called her
shi/ita wùnd-at taa-k koo	you (f)/she called her
mu/mè'e/màte wùnd-an taa-ŋ goo	we/you (p)/they called her
nì/ka/isì gàndu wòo	I/you (m)/he lay down
shi/ita gànd-ak kòo	you (f)/she lay down
mu/mè'e/màte gànd-aŋ gòo¹⁵	we/you (p)/they lay down

Since Bolanci has a transitivity-neutral agreement system rather than an icp agreement system, it must employ other means if it is to formally mark the Tr./Intr. contrast in Aux₁. This in fact it does, by the use of an overt zero anaphora marker with transitives. The marker is 'i.

isì wùndu woo-'i	he called (someone)
ita wùnd-ak koo-'i	she called (someone)
màte wùnd-aŋ goo-'i	they called (someone)

Unlike the rules providing for the use of the phonologically similar marker in Dera, restrictions on the use of 'i in Bolanci do not coincide with the distinction between Aux₁ and Aux₂.

Aux₁, Tr. with ϕ

isì dama woo-ʔi
he swept it

isì bùṅku woo-ʔi
he hid it

isì ṅgor woo-ʔi
he tied it

Aux₂, Tr. with ϕ

isìṅko dèmè-ʔi¹⁶
he is sweeping it

isìṅko bùṅkà-ʔi
he is hiding it

isìṅko ṅgora-ʔi
he is tying it

The above examples can be contrasted with Intr. verbs of the same phonological classes.

Aux₁ Intr.

isì pata wòò
he went out

isì bùṅku wòò
he hid

isì ṅgor wòò
he was tied

Aux₂ Intr.

isìṅko pètè
he is going out

isìṅko bùṅkà
he is hiding

isìṅko ṅgora
he is being tied

While the use of ʔi as a phonological representation of ϕ is not limited specifically to one tense set, Aux₂, as in the case of Dera, it is subject to a variety of other restrictions. For example ʔi is not used with verbs in the imperative or subjunctive, nor does it co-occur with the "totality" particle *tù* or the "ventive" particle *ko*. Moreover, it is not used, no matter what the tense or verb form, when followed by the negative marker *saa*. In all of these cases, the formal distinction between Tr. and Intr. constructions is thereby lost with resultant ambiguity, or lack thereof, being dependent on matters of semantic plausibility.

Imperative:

Tr.			Intr.		
dèmèè / dàmaà	sweep it!	(sg/pl)	pètèè / pàtaà	go out!	(sg/pl)
bùṅkiì / bùṅkaà	hide it!	(sg/pl)	bùṅkiì / bùṅkaà	hide!	(sg/pl)

Subjunctive:

doolè ka màri	you must hoe it	doolè ka ʔyòri	you must stop
kadàa màtè bàlè	lest they melt it	kadàa màtè bàlè	lest they melt

tù — "totality" particle¹⁷

isì damatù woo he swept it up
cf. isì dama woo-ʔi he swept it

isì gòjjutù woo he bought it all
cf. isì gòjju woo-ʔi he bought it

ko — "ventive" particle (with Aux₂ only)¹⁸:

Tr.
isìŋko gòjjàa ko
he is buying (and bringing) it
cf. isìŋko gòjjàa-ʔi he is buying it

isìn bàsàa ko
he will shoot it (in this direction)
cf. isìn bàsè-ʔi he will shoot it

Intr.
isìŋko mbaḍàa ko
he is arriving (here)

isìn pàtāa ko
he will come out

Negative:

Tr.
isì gòjju saa¹⁹ he didn't buy it
isìŋko dèmè saa he isn't sweeping it
isìŋko bùŋkà saa he isn't hiding it

Intr.
isì sòoru saa he didn't fall
isìŋko pètè saa he isn't going out
isìŋko bùŋkà saa he isn't hiding

Finally, it should be pointed out that Bolanci does make limited use of a morphological process to construct Tr. stems from basically Intr. roots. How productive this derivational process is I cannot say. The Tr. stem is formed by taking the initial CVC of the root and adding the suffix *tu*²⁰. In terms of tone pattern and verb form alternations, the resultant Tr. stem behaves just like any other CVCCV verb.

Tr.
isì bòltu woo-ʔi
the boy broke it

ita làyt-al làawò
she bore a child

isìŋko yawtā-ʔi
he is taking it down

isìŋko ŋgontà doḃḃo
he is filling a pot

Intr.
zàawà ḃolu wòo
the stick broke

ita làyy-ak kòo
she gave birth

isìŋko yawwà
he is getting down

doḃḃo ḡko ŋgoma
the pot is filling

Due to the use of distinct stems, the Tr./Intr. contrast remains evident even in environments where the \emptyset marker is phonologically zero and not marked by ʔi.

Tr.
yàwtiḥ
take it down
kadāa ita làyte
lest she give birth to it
isìŋko ŋgontāa ko
he is filling it (and will bring it)
isìn ḃoltà saa
he will not break it

Intr.
yàwwiḥ
get down
kadāa ita làyye
lest she give birth
isìŋko ŋgòmāa ko
it is filling
isìn ḃola saa
it will not break

In the preceding sections on Dera and Bolanci three grammatical means of formally marking the Tr./Intr. contrast were described: (a) the marking of intransitives by icp pronouns, (b) the marking of transitives by an overt ϕ anaphora marker, $i \sim 'i$, and (c) the formation of Tr. stems by a morphological formative **tu**. In this section I will approach the question of transitivity from a comparative-historical perspective and inquire to what extent these grammatical processes are presently found in or are reconstructable for Hausa.

(a) **icp**: Looking at Chadic languages other than Dera, we find that icp suffixes are also used in Tangale and in Ngizim. The existence of this feature in Ngizim is especially significant since it rules out the possibility of its being a historically recent Dera-Tangale innovation. Bolanci, which, as we have seen, does not mark intransitives with icp suffixes, does exhibit an 8-term agreement system with adjectives of state, e.g. **nì dōwanno** 'I am seated', **ka dōwakko** 'you (m) are seated', **shi dōwashshi** 'you (f) are seated', etc. It seems reasonable therefore to suggest that Bolanci must have employed an icp system for intransitives prior to the adoption of its present transitivity-neutral agreement system.

Internal matters aside, the closeness of the relationship between Hausa and these other languages naturally leads to the hypothesis that at an earlier time Hausa too must have employed an icp system²¹. In fact vestiges of this older system still exist. Abraham²², for example, notes icp usage in a sentence ascribed to the conservative Daura dialect, **naa zoo nì** 'I came', while Skinner²³ has noted similar examples in texts dating back to the beginning of the century, e.g. **kada ka zo ka** 'don't come', **fito, mu zo mu gida** 'come out, let's go home'. Like many grammatical archaisms, the icp construction in Hausa has persisted most tenaciously in the most common, highest frequency phrases. Compare the 'irregular' imperatives 'come' and 'go', containing fossilized icp's, with the corresponding, but perfectly regular, imperatives in Dera.

Hausa:	yaa-kà	yaa-kì	yaa-kù	come! (m/fem/pl)
Dera:	wò-ko	wò-shi	wò-ku	
Hausa:	jèe-ka ²⁴	jèe-ki	jèe-ku	go! (m/fem/pl)
Dera:	tà-ko	tà-shi	tà-ku	

In light of the above, I suggest that at a not too distant period in the past, Hausa intransitives in Aux₁ were regularly and systematically marked by a fully operative icp agreement system.

(b) ϕ **anaphora marker**: Like Dera, Tera, a distantly related Chadic language, overtly marks zero anaphora only when occurring with a verbal noun in Aux₂²⁵. It seems reasonable to assume, therefore, that Bolanci's use of its overt marker in Aux₁ represents an innovative extended usage. We might thus start with a working assumption that any overt ϕ marker that Hausa might have had would also have been restricted to Aux₂.

In fact, some scholars have already proposed, in effect, that modern Hausa does have an overt ϕ marker found only in Aux₂ — the morpheme **waa**²⁶, as in **yanàa cikàa-waa**

"he is filling (it)", *tanàa dafàa-waa* "she is cooking (it)", etc. For example, Hodge states: "This /-wà/ indicates an indefinite object. Action is being performed but the object of the action is not specified ..." ²⁷ The following paradigm in which the \emptyset object is unmarked in Aux₁ and represented by *waa* in Aux₂ would seem to capture the essence of Hodge's analysis.

Aux ₁	Aux ₂	
yaa kaamà yaaròò	yanàa kaamà yaaròò	he caught/is catching the boy
yaa kaamà shi	yanàa kaamà shi	he caught/is catching him
yaa kaamà	yanàa kaamà waa	he caught/is catching (it)

Similarly, when Gouffé ²⁸ asserts that *waa* "est de nature pronominale" it seems clear that his intent is not so much to label *waa* as a personal pronoun — he recognizes tonal and other differences — but rather to suggest that the function of *waa* is essentially anaphoric. In addition, the present author has explicitly described Hausa *waa* as a \emptyset marker on a number of occasions ²⁹.

The most obvious flaw in the interpretation of *waa* as a \emptyset object marker is the fact that it equally occurs with Intr. verbs. e.g. *yanàa koomàa-waa* "he is returning", *yanàa fitòò-waa* "he is coming out", *yanàa fàaru-waa* "it is happening". In fact, as a full range of grammatical facts about Hausa are considered in depth, the counter evidence becomes so overwhelming that one is forced to accept the conclusion that the interpretation of *waa* as a \emptyset marker is entirely wrong, and that the traditional analysis of *waa* as a verb nominalizer is still valid ³⁰.

Given the fact that *waa* is a nominalizer — cognate with Dera *ma* — and not an anaphora marker, it is clear that present day Hausa has no means of overtly marking deleted objects. Nevertheless, on the basis of general grammatical congruity between Hausa and Bolanci and Dera, I would suggest that early Hausa might have had a \emptyset marker, *i*, which was used only in Aux₂ along with the nominalizer *waa*. If this conjecture is correct — and at this point it is admittedly conjecture — then the formal contrast between Tr. and Intr. that is neutralized in modern Hausa in Aux₂, would at that time have been clearly marked, e.g.

Aux ₂ Tr. with \emptyset (reconstructed)	Aux ₂ Intr. (reconstructed and actual)
*yanàa ginàa-wa-i he is building (it)	yanàa zamnàa-waa he is sitting down
*yanaà sayòò-wa-i he is buying (and bringing) (it)	yanàa koomòò-waa he is returning
*yanàa koonèè-wa-i he is burning (it)	yanàa koonèè-waa it is burning

In considering the likelihood of **i* being lost (and thus the likelihood of its having been there in the first place) it is worth remembering that although present day Bolanci still has a cognate \emptyset marker *ʔi*, it is synchronically deleted in as many or more environments than it is actually used.

(c) derived transitive verb stems: It is now generally understood that the term "causative" as applied to the Hausa -aĩ/-as verbs (Grade V) is a morpho-syntactic label not to be construed too literally in semantic terms³¹. One function of this multifunctional and polysemic grade is simply to construct Tr. stems out of inherently Intr. roots, e.g.

Intr.	Tr. with N object	Tr. with Ø object
yaa fìta	yaa { $\begin{matrix} \text{fitad dà} \\ \text{fid dà} \end{matrix} \}$ tùuluu	yaa fitaĩ
he went out	he took out the water-pot	he took (it) out
yaa mayàa	yaa { $\begin{matrix} \text{mayad dà} \\ \text{may dà} \end{matrix} \}$ tinkìyaa	yaa mayaĩ
he returned	he returned the ewe	he returned (it)

While the semantic relationship of Hausa Grade V's to Intr. roots corresponds to the relationship of Bolanci Tr. stems with *tu* to underlying Intr. roots, morpho-syntactically the identification of Hausa Grade V with Bolanci *tu* stems doesn't hold. One reason is that the Grade V's with expressed noun objects behave structurally more like Intr. verbs with the associative particle "with" than they do like true transitives.

When we turn to the "de-causatives" of the Agades dialect described by Gouffé, we find a different story. In this dialect, verbs corresponding to the causatives in standard Hausa treat the final *dà* of the verb as an integral part of the stem, rather than as an independent particle. In terms of tone pattern and vowel length alternations, these de-causatives pattern with non-derived mono-morphemic verbs in Grade I.

de-causatives	Grade I	
yaa fiddà tùuluu	yaa cikà tùuluu	he took out/filled the pot
yaa fiddàa shi	yaa cikàa shi	he took out/filled it
yaa maydà tinkìyaa	yaa kaamà tinkìyaa	he returned/caught the ewe
yaa maydàa ta	yaa kamàa ta	he returned/caught it

Note that in the de-causatives, the final vowel of the *dà* is lengthened before pronoun objects as is the case for all verb final vowels in Hausa in that environment. By contrast, the Grade V particle *dà* does not lengthen and is followed by independent rather than object pronouns, e.g. yaa fiddà shii, yaa maydà ʔita.

Further indication that the *dà* in the de-causatives is an integral part of the stem is provided by the freedom of these stems to be altered into secondary grades such as Grade VI just like other verbs, e.g.

yaa fiddoo tùuluu	he brought out the pot
yaa maydoo tinkìyaa	he returned the ewe (here)
cf. yaa cikoo tùuluu ³²	he filled the pot (and brought it)
yaa kaamoo tinkìyaa	he caught the ewe (and brought it)

Similarly a derived stem in Bolanci with *tu*, such as *bòltu* "to break (something)" or *yàwtu* "to take down", belongs to the same tonal class, undergoes the same morpho-

phonemic alternations, and has the same syntactic capabilities as a non-derived stem of the same canonical shape, such as **dòppu** "to follow" or **dĩṅku** "to cook".

	N object	pn object	verbal noun
Derived stem	isì yàwtu làawò he took the boy down	isì yàwti-nì-woo he took him down	isìṅko yawtà-ʔi he is taking it down
Simple stem	isì dòppu làawò he followed the boy	isì dòppi-nì-woo he followed him	isìṅko dòppà-ʔi he is following it
	"ventive" (= Grade VI)		"totality" (= Grade IV)
Derived stem	isì bòlṭi-ṅ goo-ʔi he broke (and brought) it		isì bòlṭu-tù woo he broke it up
Simple stem	isì dĩṅki-ṅ goo-ʔi he cooked (and brought) it		isì dĩṅku-tù woo he cooked it up

Synchronically, the de-causatives in Agades Hausa are in many respects more similar to the **tu**-stems in Bolanci than they are to corresponding causatives in standard Hausa. I would argue that historically this is probably true as well. Whereas Gouffé and Parsons seem to imply that the Agades forms are historically derived from causatives with **dà** — Parsons speaks of "this accretive process" while the term "de-causative" is Gouffé's — I would suggest that the **dà** used to form Hausa de-causatives is cognate with Bolanci **tu** and in origin independent of and probably prior to the development of Hausa causatives formed with the suffix **-as** and the associative morpheme **dà** "and/with"³³. With the later development of the causatives, dialects of the standard Hausa pattern must have reinterpreted the stem formative **dà** as the associative particle **dà**, the result being the eventual loss of the historically older **dà** as a productive morphological stemformative.

In this paper the contrast between transitive and intransitive constructions is described for Dera and Bolanci, two closely related Chadic languages. Intransitives in Dera are shown to be marked by the use of an 8-person agreement system, transitives by the presence of an overt zero anaphora marker **i**. Bolanci is shown to have a cognate **Ø** marker and, in addition, to have a morphological formative **tu** used for constructing transitive verb stems from intransitive roots. Finally, Hausa's possible use of these three methods of transitivity marking is investigated from a comparative-historical viewpoint. It is found that vestiges of two of these methods (intransitive agreement and transitive stem formation with **tu**) still survive in modern Hausa, while the third method (the marking of **Ø** anaphora by **i**) is no longer used but can be reconstructed for some earlier period³⁴.

Notes

1. In this paper Lo tone is indicated by a grave accent, Hi tone is left unmarked. Vowel length is indicated by double letters. The symbol **ṛ** represents the rolled (or trilled) consonant that in Hausa contrasts with a flap **r**. Otherwise I am following standard Hausa orthography.

2. I use the term "Chadic" to include the languages included in the "Handbook" under "Chadic" and "Chado-Hamitic". Dera and Bolanci belong to the Bolewa Cluster of the Western Group of the Platel (= Plateau-Sahel) Branch of this family. See Paul Newman and Roxana Ma, *Comparative Chadic: Phonology and Lexicon*, *Journal of African Languages*, vol. 5 (1966), pp. 218–51; Paul Newman, *Historical Sound Laws in Hausa and in Dera (Kanakuru)*, *Journal of West African Languages*, vol. 7 (1970), pp. 39–51; D. Westermann and M.A. Bryan, *Handbook of African Languages, Part II: Languages of West Africa*, London (1952), sections IX and X contributed by J. Lukas; and J. Greenberg, *The Languages of Africa*, Bloomington (1963).
3. Dera, also known as Kanakuru, is spoken in Northeastern Nigeria (Biu and Numan Divisions) along the Rivers Hawal and Gongola. The materials presented here are based primarily on the speech of Malam Lafuwa Shani and Malam Usuman Maina Jiba Shani.
4. I use the term "tense" rather than "aspect" or some other circumlocution fully aware that the semantic feature distinguishing Dera, Hausa, and Bolanci tenses is not primarily one of time.
5. For syntactic purposes Dera pronouns can be treated as simply representing 8 contrasting "persons": 1, 2 m, 2 f, 3 m, 3 f, 1 p, 2 p, and 3 p.
6. In non-final position the vowels in parentheses are generally dropped at normal speech tempo.
7. The replacement of the final vowel of the verb and any pronoun suffix by /a/ is a distinctive feature of the relative perfective tense.
8. A Lo tone in the space between two Hi tones causes the second Hi to be realized as a Downstep.
9. The Hausa nominalizer *ɓaa* behaves similarly except that *ma* is used before personal pronoun objects while *ɓaa* is not.
10. The hyphen between the *ma* and the *i* represents a morpheme cut. Phonologically the vowels form a single diphthong [mai].
11. Bolanci (the language of the Bolewa people) is spoken in Northeastern Nigeria in Fika Emirate, north of the Gongola River, and in Gombe Emirate, to the south and west of the Fika area. The materials presented in this paper are from the less well known Gombe dialect. My major informants were Malam Salihu Ma'aji Gadam and Malam Shu'aibu Gadam.
12. The subjunctive and imperative in Bolanci behave differently from the other tenses and must be considered to constitute an Aux₃.
13. For lack of a better word, I have extended the use of the term "gender" to refer to these 3 mutually exclusive categories. "Masculine" includes persons 1, 2 m, 3 m; "feminine" includes 2 f, 3 f; and "plural" includes 1 p, 2 p, 3 p.

14. There are actually other conditions on the rule, but this general formulation is adequate for the present discussion.
15. **woo~koo~goo** are phonologically conditioned allomorphs of the perfective marker **woo**. In underlying structure, **woo** is generated after pronoun objects but before noun objects. If the surface structure actually contains a noun object, i.e. it has not been anaphorically deleted, then **woo** is obligatorily deleted. Note that the tone of **woo** is Hi in some environments and Lo in others. I cannot say whether this tonal contrast is a direct reflection of the Tr./Intr. contrast or whether it is due to some general phonological rule.
16. Bolanci gerundives are derived from related verb stems by a combination of complicated, but systematic, vowel and tone rules, whose description goes beyond the scope of this paper.
17. This particle indicates action well or completely done. It corresponds to the Hausa verb forms with final /e/ and Hi-Lo tone (Grade IV).
18. This particle indicates action in the direction of or for the benefit of the speaker. It corresponds to the Hausa verb forms with final /oo/ and Hi-Hi tone (Grade VI). In Bolanci this particle has three suppletive allomorphs, for use with each of the three tense sets.
19. The perfective marker **woo** is also deleted before the negative, whether in Tr. or Intr. sentences.
20. This is not to be confused with the "totality" particle with Lo tone **tù**.
21. Hausa, along with Dera and Bolanci, clearly belongs to the western group of Chadic, Greenberg's group 1. Its exact position within this group is still undetermined.
22. R.C. Abraham, *Dictionary of the Hausa Language*, London (1962).
23. A.N. Skinner, *The Language of Edgar's Tatsuniyoyi*, (unpublished manuscript). I wish to thank Professor Skinner for bringing these examples to my attention.
24. Monosyllabic verbs in Dera belong to one of two tonal classes. In the imperative, the icp's take polar tone, e.g. **tà-ko** "go", **ga-kò** "enter". The tonal difference in Hausa between **yaa-kà** and **jèe-ka** may be a survival of this same phenomenon.
25. For example, **á masa-r-án** "he is buying (it)" (where **r** is the nominalizer and **an** is a rewrite of **Ø**) vs. **wà masa** "he bought (it)".
26. The tone on the /w/ is realized as a Lo on the length component of a preceding long vowel.
27. C.T. Hodge and I. Umaru, *Hausa Basic Course*, Washington, D.C. (1963) p. 167.
28. C. Gouffé, *Les problèmes de l'aspect en haoussa. II – Le problème de l'Inac-compli I et II*, *Groupe Linguistique d'Etudes Chamito-Sémitiques*, vol. 11 (1966/67) pp. 46–47.

29. See, for example, my "A Grammar of Tera", Berkeley and Los Angeles (1970) p. 116.
30. For example, F.W. Taylor, *A Practical Hausa Grammar*, Oxford (1923, 2nd edition 1959) p. 60: "A 'complete' verb in Hausa employs each of the five vowels ... and to each of the vowels, except i, may be added the termination *-wā* to form the verbal noun."
31. My discussion of causatives draws heavily on two important papers: C. Gouffé, *Observations sur le degré causatif dans un parler haoussa du Niger*, *Journal of African Languages*, vol. 1 (1962), pp. 182–200; and F.W. Parsons, *Further Observations on the 'Causative' Grade of the Verb in Hausa*, *Journal of African Languages*, vol. 1 (1962), pp. 253–72. I will not attempt to footnote my indebtedness to them for each point raised in my discussion.
32. According to my observations, the final *-oo* of a Grade VI verb does not shorten before noun objects as claimed by Parsons. See J. Carnochan, *Glottalization in Hausa*, *Transactions of the Philological Society* (1952), p. 89 and C. Gouffé, *Deux notes grammaticales sur le parler haoussa de Dogondoutchi*, *Afrika und Übersee*, vol. 52 (1968/69), p. 8 n.
33. The older form of the causative suffix is of course *-as*, as Parsons says, and not *-aĩ*.
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